RR-032-C42-07-102618-2-A

"This report cancels and replaces the test report N°RR-032-C42-07-102618-2-A Edition 1"

E.M.C Test Report

According to the standard:
FCC PART 15:2007

Equipment under test:
JETCARE SYSTEM EDUCATION PRO

Company:
DYNAVET S.A.S

FCC listed: 910 701

DISTRIBUTION: Mr FOURNIER **(Company:** DYNAVET S.A.S.)

Number of pages: 19 with 2 annexes

Ed.	Date	Modified page (s)	Written by Name	Visa	Technical Verification and Quality Name	Visa
2	24/02/09	8, 10	B. PELLERIN	BPe	Jean-Charles BOGA	JBOGA

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3, rue des Coudriers - CAP 78 - ZA de l'Observatoire - 78180 MONTIGNY LE BX - Siret : 344 545 645 00022
Tél. : 01 30 57 55 55 - Fax : 01 30 43 74 48 - E-mail : contact@emitech.fr - URL : www.emitech.fr
S.A. au capital de 480 000 € - R.C. VERSAILLES B 344 545 645 - APE 742 C

TEST CERTIFICATION FOR	:	*Fcc Certification*
NAME OF THE EQUIPMENT UNDER TEST	:	JETCARE SYSTEM EDUCATION PRO
Type	:	Not communicated
Serial number	:	Not communicated
NAME OF THE MANUFACTURER	:	DYNAVET S.A.S.
ADDRESS OF THE APPLICANT:		
Company	:	DYNAVET S.A.S.
Address	:	51 rue Chappe 63051 CLERMONT FERRANT Cedex 02 FRANCE
Person in charge	:	Mr FOURNIER
Person present during the test	:	Mr AZAM
DATE OF TEST	:	29/08//2007
TEST LOCATION	:	Open area test site in Aunainville (28) - FRANCE
TEST OPERATOR	:	B. PELLERIN

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1. *INTRODUCTION*

This document submits the results of Electromagnetic Compatibility tests performed on the equipment « JETCARE SYSTEM EDUCATION PRO » herein referred to as the EUT, according to the document listed below.

2. *REFERENCE DOCUMENT*

FCC Part 15:2007: Code of federal regulations
Title 47- Telecommunication
Chapter 1- Federal Communication Commission
Part 15- Radio frequency devices
Subpart B- Unintentional Radiators
Limits and methods of measurement of radio disturbance
Characteristic of information technology equipment.

3. *EQUIPMENT UNDER TEST (EUT) CONFIGURATION*

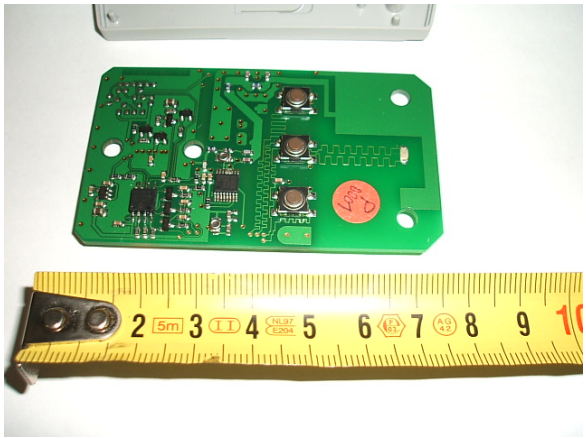
See photographies next page.

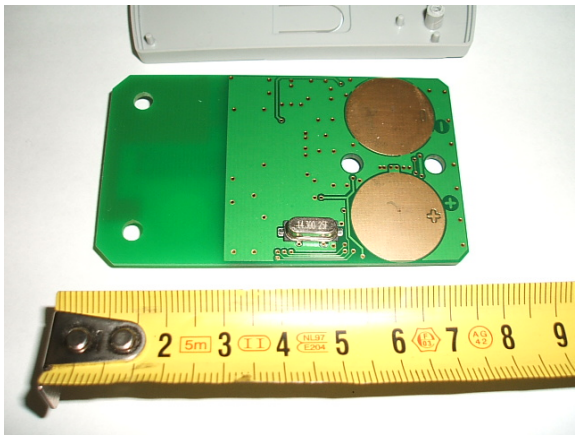
Modification of the equipment during the test: Yes

- Transmitter power is adjust for respect the standard.

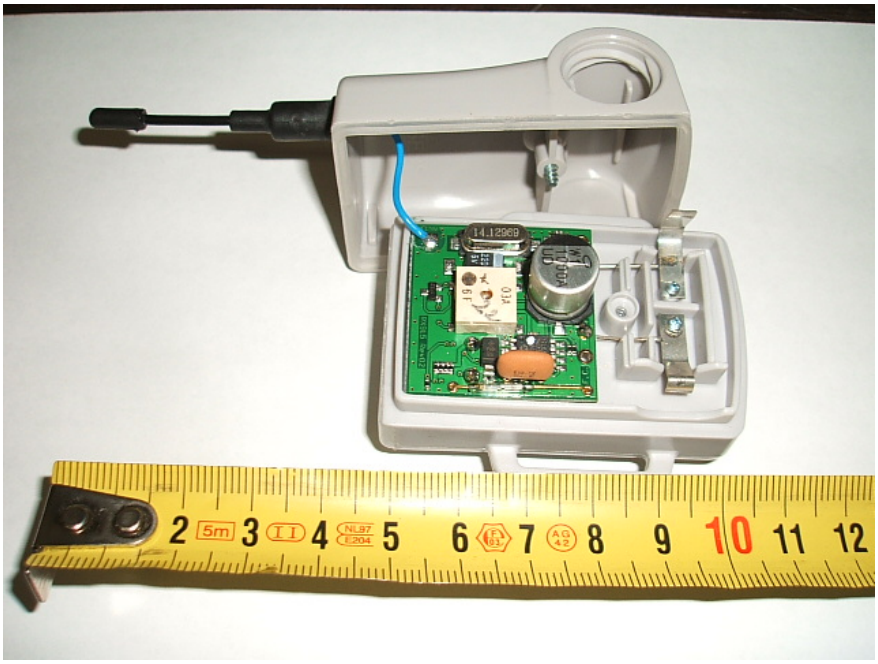
Photographies of the equipment under test (EUT)

Transmitter





Receiver



4. *SUMMARY OF TEST RESULTS*

The following table summarizes test results of the EUT.

Designation of test	Test results				Comments
	Pass	Fail	N.A.	N.P.	
Intentional radiated emissions	x				Section 15.249 (a)
Unintentional radiated emissions	x				Section 15.249 (d) and 15.109
Conducted emissions			x		Section 15.207

N.A.: Not Applicable
N.P.: Not Performed

The tested sample "JET CARE SYSTEM EDUCATION PRO" complies with the requirements of the standard:

- FCC PART 15:2007

according to the limits specified in the present report.

5. *INTENTIONAL RADIATED EMISSIONS*

Standard: FCC PART 15:2007

Section: 15.249 (a)

Ed.2 | Test method: ANSI C63.4 : 2003

Equipment under test arrangement

The equipment under test (EUT) is placed on a non-conductive test table at 0.8 m above the horizontal metal ground plane.

For maximum meter reading at each frequency, the antenna height is adjusted between 1 m and 4 m above the ground plane. A 360 degrees rotation of the EUT is performed in vertical and horizontal polarization. The frequency, azimuth and antenna height are presented in the table on the next page. Only the highest level is recorded.

Frequency range: 902 MHz - 928 MHz

Detection mode: Average

Resolution bandwidth: 120 kHz

Measurement distance: 3 meters.

Limit:

94.0 dBµV/m at 3 meters.

Operating mode during the test:

The transmitter is in permanent transmission without modulation.

Instrumentation test list:

Meter	Nr Emitech	Category	Brand	Type
187	16/004	Open site	Emitech	Aunainville
1057	02/045	Receiver	Rohde & Schwarz	ESVP
2341	19/018	Antenna mast	HD GmbH	MA 240
2342	19/019	Mast controller	HD GmbH	HD 100
2450	35/070	Cable	Cables & Connectiques	HF 12m
2451	35/071	Cable	Cables & Connectiques	HF 2m
2452	35/072	Cable	Cables & Connectiques	HF 13m
3106	24/571	Antenna	Schwarzbeck	UHALP 9108
4186	18/379	Attenuator	Radiall	SMA-2W-20dB-18GHz

Results:

For transmitter

FREQUENCY (MHz)	ANTENNA POLARIZATION	ANTENNA HEIGHT (cm)	AZIMUTH (degrees)	MEASUREMENT (dBµV/m)	LIMIT (dBµV/m)	MARGIN (dB)
915,442	Vertical	171	220	82,4	94,0	11,6
	Horizontal	100	290	91,4	94,0	2,6

Observation during the test:

The equipment complies with the requirements of the standard FCC PART 15:2007.

6. *UNINTENTIONAL RADIATED EMISSIONS*

Standard: FCC PART 15:2007

Section: 15.249 (a)
15.249 (d)
15.109

Ed.2 Test method: ANSI C63.4 : 2003

Equipment under test arrangement:

The equipment under test (EUT) is placed on a non-conductive test table at 0.8 m above the horizontal metal ground plane.

For maximum meter reading at each frequency, the antenna height is adjusted between 1 m and 4 m above the ground plane. A 360 degrees rotation of the EUT is performed in vertical and horizontal polarization. The frequency, azimuth and antenna height are presented in the table on the next pages.

Test configuration photographies:

Frequency range: 30 MHz - 9.15 GHz

Detection mode: Quasi-peak (for 30 MHz - 1 GHz)
Average for 1 GHz - 9.15 GHz

Resolution bandwidth: 120 kHz (for 30 MHz - 1 GHz)
1 MHz for 1 GHz - 9.15 GHz

Measurement distance: 3 meters (for 30 MHz - 1 GHz)
3 meters for 1 GHz - 9.15 GHz

Limit: The EUT must satisfy requirements of the section 15.249 (d):

- For harmonic of fondamental frequency : 54 dBµV/m
- For emission radiated outside of specified frequency band: 44 dBµV/m

Operating mode during the test:

The transmitter is in permanent transmission without modulation.

The receiver is in standby mode.

Instrumentation test list:

Meter	Nr Emitech	Category	Brand	Type
187	16/004	Open site	Emitech	Aunainville
1057	02/045	Receiver	Rohde & Schwarz	ESVP
1097	18/082	High pass filter	Trilithic	6HC1300-2.5-KK
2205	02/068	Spectrum analyzer	Agilent	E7405A
2341	19/018	Antenna mast	HD GmbH	MA 240
2342	19/019	Mast controller	HD GmbH	HD 100
2450	35/070	Cable	Cables & Connectiques	HF 12m
2451	35/071	Cable	Cables & Connectiques	HF 2m
2452	35/072	Cable	Cables & Connectiques	HF 13m
2864	35/241	Cable	Cables & Connectiques	N-SMA
2896	35/273	Cable	Cables & Connectiques	N-13m
3106	24/571	Antenna	Schwarzbeck	UHALP 9108
3229	01/127	Preamplifier	Miteq	AMF-6D-010250-70-7P
3374	24/604	Antenna	Emco	3115
4186	18/379	Attenuator	Radiall	SMA-2W-20dB-18GHz

Results:

For transmitter

See table next page.

For receiver

No significant frequency has been found.

Observation during the test:

The equipment complies with the requirements of the standard FCC PART 15:2007.

TEST SITE: Open area test site TABLE 1

RADIATED EMISSION: Electric field

STANDARD: FCC Part 15:2007

TEST DISTANCE: 3 m (for 30 MHz - 1 GHz)
3 m (for 1 GHz - 9.15 GHz)

POLARIZATION: Vertical

FREQUENCY (MHz)	POLARITY	ANTENNA HEIGHT (cm)	AZIMUTH (degrees)	MEASUREMENT (dBµV/m)	LIMIT (dBµV/m)	MARGIN (dB)
1830,88	V	100	270	50,8	54	3;2
1830,88	H	107	187	44,4	54	9,6
2746,35	V	163	266	48,0	54	6,0
2746,35	H	227	180	47,0	54	7,0

« □□□ *End of report, 2 annexes to be forwarded* □□□ »

ANNEX 1

Antenna factors, insertion losses and amplifier values

BILL OF MATERIAL

The test antenna used for the radiated emission between 30 MHz and 300 MHz is the biconical antenna n°1144. Antenna factors are given in table 1.

The test antenna used for the radiated emission between 300 MHz and 1 GHz is the log-periodic antenna n°3106. Antenna factors are given in table 2.

The measuring receiver n°1216 used in the frequency range 30 MHz to 1 GHz has an integrated preamplifier.

The test cable used between 30 MHz and 1 GHz to connect the antennas to the receiver for measurements at a distance of 3 meters has losses given in table 3.

The test antennas used for the radiated emission between 1 GHz and 25 GHz are the horn antenna n°3374 and 1045. Antenna factors are given in table 4 and 5.

The amplifier n°3229 and its cable used to connect the spectrum analyzer to the test cable has gain values given in the table 6.

The test cable used between 1 GHz and 25 GHz to connect the horn antenna to the amplifier for measurements at a distance of 3 meters has losses given in table 7.

Frequency (MHz)	Antenna factor (dB/m)	Frequency (MHz)	Antenna factor (dB/m)
30	12.6	120	11.4
35	11.2	-	-
40	9.6	140	11.2
45	8.7	-	-
50	8.7	160	12.5
60	8.7	-	-
70	8.7	180	13.3
80	8.6	200	14.7
90	9.5	-	-
100	10.5	-	-

TABLE 1 : BICONICAL ANTENNA

Frequency (MHz)	Antenna factor (dB/m)	Frequency (MHz)	Antenna factor (dB/m)
200	23.0	-	-
300	14.5	700	20.2
400	16.1	800	21.0
500	17.8	900	21.2
600	18.9	1000	22.1

TABLE 2 : LOG-PERIODIC ANTENNA

Frequency (MHz)	Loss (dB)	Frequency (MHz)	Loss (dB)
30	0.9	150	2.3
35	1.1	160	2.4
40	1.1	180	2.5
45	0.9	200	2.6
50	1.3	250	3.1
60	1.4	300	3.4
70	1.5	400	4.2
80	1.5	500	4.9
90	1.7	600	5.5
100	1.7	700	6.0
120	2.0	800	6.6
125	1.9	900	7.2
140	2.2	1000	7.9

TABLE 3 : TEST CABLE FOR 3M MEASUREMENT INTO 30MHz and 1GHz

Frequency (GHz)	Antenna factor (dB/m)	Frequency (GHz)	Antenna factor (dB/m)	Frequency (GHz)	Antenna factor (dB/m)
1.0	23.4	7.0	35.3	14	41.6
1.5	25.5	7.5	36.5	15	40.9
2.0	26.8	8.0	36.7	16	37.3
2.5	29.0	8.5	37.5	17	39.9
3.0	29.9	9.0	37.8	18	47.4
3.5	31.1	9.5	37.7	18	31.4
4.0	32.6	10.0	37.8	19	31.7
4.5	32.3	10.5	37.9	20	32.8
5.0	33.3	11.0	38.2	21	32.0
5.5	34.1	11.5	38.6	22	32.7
6.0	34.1	12.0	39.1	23	32.4
6.5	33.9	13	39.6	24	32.6

TABLE 4 : HORN ANTENNA 3374 (1 to 18 GHz) and 1045 (18 to 25 GHz)

Frequency (GHz)	Gain value (dB)	Frequency (GHz)	Gain value (dB)	Frequency (GHz)	Gain value (dB)
1.0	24.3	7.0	19.6	15	13.3
1.5	23.6	8.0	18.3	16	9.8
2.0	22.3	9.0	16.2	17	11.0
2.5	20.9	10.0	15.0	18	11.1
3.0	19.1	11.0	15.1	20	5.4
4.0	17.1	12.0	15.9	22	1.4
5.0	17.7	13.0	17.5	-	-
6.0	18.2	14	16.8	-	-

TABLE 5 : AMPLIFIER (1 – 26 GHz)

Frequency (GHz)	Loss (dB)	Frequency (GHz)	Loss (dB)	Frequency (GHz)	Loss (dB)
1.0	2.4	4.0	5.0	12	9.0
1.5	2.9	4.5	5.2	15	10.2
2.0	3.5	5	5.6	18	11.2
2.5	3.9	6	6.2	21	13.3
3.0	4.2	8	7.2	24	14.9
3.5	4.6	10	8.2	-	-

TABLE 6: TEST CABLE FOR 3 M MEASUREMENT

ANNEX 2:

CALIBRATION DATE

N° EMITECH	LAST CALIBRATION	CALIBRATION DUE DATE
2205	22/05/06	22/05/08
3374	20/01/06	20/01/08
2896	22/02/07	22/02/09
1097	22/02/07	22/02/09
187	18/06/07	18/06/09
3106	18/06/07	18/06/09
2450	30/01/06	30/01/08
2451	30/01/06	30/01/08
2452	05/04/06	05/04/08
1529	22/02/07	22/02/09
1057	04/07/07	04/07/09
3229	06/04/07	06/04/09
4186	25/10/05	25/10/07
2864	22/02/07	22/02/09